CLAIMS:

1. A shared medium communication system (100) comprising:

- a primary station (102) arranged to receive an access request (108), process the access request (108) and send a grant (110) in response to the access request (108);
- a secondary station (104) for sending the access request (108) and for receiving the grant (110); and
- a shared medium (106) coupling the primary station (102) with the secondary station (104),

characterized in that the secondary station (104) is arranged to merge several access requests (108) into a multi-request (108) and send the multi-request (108) to the primary station (102), and in that the primary station (102) is arranged to receive the multi-request (108), process the multi-request (108) and send the grants (110) in response to the access requests (108) merged in the multi-request (108).

2. A shared medium communication system (100) as claimed in claim 1, characterized in that the secondary station (104) is arranged to adapt the merging of the access requests (108) in dependence on histories of access requests (108) previously merged, multi-requests (108) previously sent and/or grants (110) previously received.

3. A shared medium communication system (100) as claimed in claim 1, characterized in that the secondary station (104) is arranged to adapt the sending of the multi-request (108) in dependence on histories of access requests (108) previously merged, multi-requests (108) previously sent and/or grants (110) previously received.

4. A secondary station (104) for sending an access request (108) to a primary station (102) and for receiving a grant (110) from the primary station (102) in response to the access request (108), the access request (108) comprising a request (108) for access to a shared medium (106), characterized in that the secondary station (104) is arranged to merge several access requests (108) into a multi-request (108) and send the multi-request (108) to the primary station (102).

5. A secondary station (104) as claimed in claim 4, characterized in that the secondary station (104) is arranged to adapt the merging of the access requests (108) in dependence on histories of access requests (108) previously merged, multi-requests (108) previously sent and/or grants (110) previously received.

6. A secondary station (104) as claimed in claim 4, characterized in that the secondary station (104) is arranged to adapt the sending of the multi-request (108) in dependence on histories of access requests (108) previously merged, multi-requests (108) previously sent and/or grants (110) previously received.

7. A primary station (102) for receiving an access request (108) from a secondary station (104), for processing the access request (108) and for sending a grant (110) to the secondary station (104) in response to the access request (108), the access request (108) comprising a request (108) for access to a shared medium (106), characterized in that the primary station (102) is arranged to receive a multi-request (108) containing several merged access requests (108), process the multi-request (108) and send the grants (110) to the secondary station (104) in response to the access requests (108) in the multi-request (108).

8. A method of operating a shared medium communication system (100), the method comprising:

- a primary station (102) receiving an access request (108), processing the access request (108) and sending a grant (110) in response to the access request (108),
- a secondary station (104) sending the access request (108) to and receiving the grant (110) from the primary station (102), the access request (108) comprising a request (108) for access to a shared medium (106), characterized in that the method further comprises:
- the secondary station (104) merging several access requests (108) into a multi-request (108) and sending the multi-request (108) to the primary station (102),
- the primary station (102) receiving the multi-request (108), processing the multi-request (108) and sending the grants (110) in response to the access requests (108) merged in the multi-request (108).

9. A method as claimed in claim 8, further characterized in that the merging of the access requests (108) is adapted in dependence on histories of access requests (108)

previously merged, multi-requests (108) previously sent and/or grants (110) previously received.

10. A method as claimed in claim 8, further characterized in that the sending of the multi-request (108) is adapted in dependence on histories of access requests (108) previously merged, multi-requests (108) previously sent and/or grants (110) previously received.

11. A method of sending an access request (108) to a primary station (102) and receiving a grant (110) from the primary station (102) in response to the access request (108), the access request (108) comprising a request (108) for access to a shared medium (106), characterized in that the method comprises merging several access requests (108) into a multi-request (108) and sending the multi-request (108) to the primary station (102).

12. A method of receiving an access request (108) from a secondary station (104), processing the access request (108) and sending a grant (110) to the secondary station (104) in response to the access request (108), the access request (108) comprising a request (108) for access to a shared medium (106), characterized in that the method comprises receiving a multi-request (108) comprising several merged access requests (108), processing the multi-request (108) and sending the grants (110) to the secondary station (104) in response to the access requests (108) merged in the multi-request (108).

13. A signal for use in a shared medium communication system (100), characterized in that the signal comprises a multi-request (108) including at least two merged requests (108) for access to a shared medium (106).